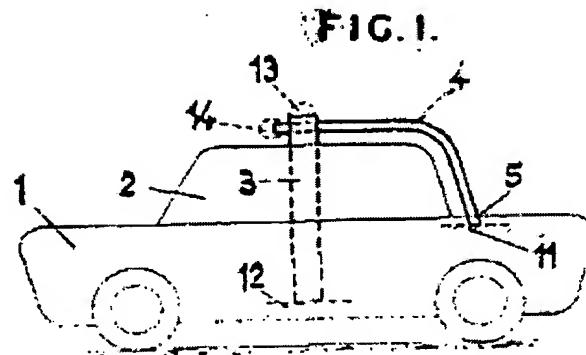


**Improvements relating to motor vehicles**

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 **Report a data error****Abstract of GB961121**

961,121. Protecting guards. DAIMLERBENZ A.G. May 23, 1963 [May 29, 1962], No. 20684/63. Heading B7B. A vehicle having a vertical interior roof support 3 has 1-4 exterior members 4 which are connected to the support 3 and extend forwardly, rearwardly or transversely to be connected at 5 releasably or permanently to the bodywork so that the external members form added protection in the event of overturning.

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# PATENT SPECIFICATION

DRAWINGS ATTACHED

961,121



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## COMPLETE SPECIFICATION

### Improvements relating to Motor Vehicles

We, DAIMLER-BENZ AKTIENGESELLSCHAFT, of Stuttgart-Uнтерtürkheim, Germany, a Company organised under the laws of Germany, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention concerns improvements relating to motor vehicles having an approximately vertical roof support disposed in the interior. The provision of roof supports of this kind often enables other roof-supporting pillars to be eliminated, whereby vision from the interior of the vehicle is substantially improved. The roofs of such vehicles, however, are not so robust that they can withstand forces which substantially exceed the forces occurring during normal travel. Particularly in the event of an accident in which the vehicle is overturned, there is a danger that the roof, and hence the glazing, of the vehicle may be damaged, or even completely destroyed, which would necessarily lead to serious injury to the occupants of the vehicle. The invention seeks to avoid these disadvantages without substantially impairing the conditions of vision.

A vehicle in accordance with the invention has an approximately vertical roof support disposed in the interior of the vehicle and one or more frame members which are disposed externally of the roof at a distance from its outer skin and are connected to the said support. Such frame members, which despite a small cross-section can be made very sturdy, will prevent contact between the actual upper part of the vehicle and the ground if the vehicle overturns and will take up the forces which then occur, so that the upper part of the vehicle will be effectively protected against damage. In addition, the frame members will have a bumper action at least

in the direction in which they extend, because they will act as skids.

A frame member may be disposed in the longitudinal central vertical plane of the vehicle and extend forwardly and/or rearwardly from the roof support. Alternatively, or in addition, a frame member may extend from the roof support towards both sides transversely of the vehicle. Use may also be made of frame members which extend obliquely rearwardly and/or forwardly or of frame members which make a U-shape in plan with the legs of the U-shape extending forwardly and/or rearwardly.

The frame members may be tubes, preferably of circular cross-section. Alternatively, they may be profiled bars, preferably of T-shaped cross-section. The frame members may be covered by a protective and/or decorative strip or sheath, preferably made of rubber, synthetic plastic or light metal.

The frame members not only serve to protect the upper part of the vehicle, but can also be used with advantage for the mounting or attachment of lamps, luggage grids and/or similar accessories and/or, if desired, for the attachment of door and/or roof hinges. The frame members and/or the roof support may be mounted partly or wholly detachably on the vehicle.

Several embodiments of the invention by way of example will now be more fully described with reference to the accompanying diagrammatic drawing, in which:

Figure 1 is a side elevation of a passenger motor car, and

Figures 2 to 6 are plan views of cars having different arrangements of frame members.

In all of the examples, 1 designates the lower part of the vehicle or its outline, 2 the upper part of the vehicle with the roof or its outline and 3 a pillar supporting the roof.

[Price 4s. 6d.]

The pillar 3 is always disposed approximately in the middle of the vehicle

In the car shown in Figure 1 and in a more diagrammatic plan view to a smaller scale in Figure 2, a frame member 4 extends rearwardly from the pillar 3 in the longitudinal central vertical plane of the vehicle. It runs in a curve in the region of the rear wall of the upper part 2, at a distance from the roof and from the rear glazing, down to the lower part 1, where it is connected at 5 to an elevated longitudinal or transverse bearer 11 of the said lower part 1. The pillar 3 is connected at its lower end to a longitudinal or transverse bearer 12 of the supporting structure of the vehicle. The connection between the member 4 and the pillar 3 and/or the part 11, as also the connection between the pillar 3 and the part 12, may be either permanent or releasable.

At the upper end of the pillar 3, which projects above the upper part 2 of the vehicle and also beyond the frame member 4, a lamp 13 is mounted which, on account of its great height, gives very good visibility even at long distances. It may, for example, be used as a warning light in the event of accident or breakdown. In police vehicles and the like, customary flashing lamps may be mounted at this point with particular advantage. Another lamp 14 may be mounted at the front end of the member 4.

The car illustrated in Figure 3 has a longitudinal frame member 4 which extends forwardly from the pillar 3. This member 4 again extends down to the lower part 1 of the vehicle and is permanently or releasably secured thereto at 5.

Figure 4 shows a car with frame members 4 which extend forwardly and rearwardly from the pillar 3 in the longitudinal central plane of the vehicle. In addition, frame members 6 indicated in broken lines extend transversely of the vehicle towards both sides. The members 6 are again located at a distance from the outer surface of the roof and from the glazing panels of the upper part 2 and are connected at 7 to the lower part 1. Transverse frame members 6 may be provided alone or in combination with longitudinal frame members 4.

In the car of Figure 5, there are connected to the pillar 3 a forwardly directed longitudinal frame member 4 and frame members 8 which, in plan view, make a U-shape whose legs extend rearwardly. Instead, the longitudinal member could extend rearwardly and the legs of the U-shape forwardly. As indicated in broken lines, frame members 9 directed obliquely rearwardly, or forwardly, could be connected to the pillar 3 instead of the U-shaped members 8.

U-shaped frame members 8 or frame members 9 extending obliquely rearwardly and/or forwardly may also be used alone, as shown

in Figure 6, in which only rearwardly directed members 8 or 9 are connected to the pillar 3. The members 8 are connected at 10 to the lower part 1 of the vehicle.

The frame members illustrated, which more or less embrace the upper part 2 of the vehicle, act as a kind of protective grid which particularly in the event of overturning of the vehicle, protects the said part 2 from contact with the ground and therefore from serious damage. Whilst still affording adequate strength, the frame members can be made so thin and can be so disposed that they do not appreciably impair the driver's field of vision. Thus the said members may in particular be tubes with a circular cross-section or bars with a T-shaped cross-section, that is to say sections which possess great strength even when of small dimensions. The frame members may be covered by protective and/or decorative strips, or sheaths, preferably made of rubber or synthetic plastic, or of aluminium or other light metal which is particularly suitable for the purpose because attractive colour effects can be obtained by anodisation or eloxation.

Apart from lamps, luggage grids and other accessories for the vehicle can be easily mounted on the external frame members. The latter may also be used for the mounting of door and/or roof hinges.

The invention is also applicable to omnibuses.

#### WHAT WE CLAIM IS:—

1. A motor vehicle having an approximately vertical roof support disposed in the interior of the vehicle and one or more frame members which are disposed externally of the roof at a distance from its outer skin and are connected to the said support. 100

2. A vehicle according to claim 1, wherein a said frame member disposed in the longitudinal central vertical plane of the vehicle extends forwardly and/or rearwardly from the roof support. 105

3. A vehicle according to claim 1 or 2, wherein a said frame member extends from the roof support towards both sides transversely of the vehicle. 110

4. A vehicle according to claim 1 or 2, wherein said frame members extend obliquely rearwardly and/or forwardly from the roof support. 115

5. A vehicle according to claim 1 or 2, wherein said frame members make a U-shape in plan with the legs of the U-shape extending forwardly and/or rearwardly. 120

6. A vehicle according to any one of claims 1 to 5, wherein the frame members are tubes.

7. A vehicle according to any one of claims 1 to 5, wherein the roof members are profiled bars. 125

8. A vehicle according to any one of claims 1 to 7, wherein the frame members are covered with a protective and/or decorative strip or sheath. 130

9. A vehicle according to any one of claims 1 to 8, wherein lamps, luggage grids or like accessories, and/or door and/or door hinges are secured to the frame members and/or the roof support.
10. A vehicle according to claim 9, wherein a lamp or lamps is or are mounted on a prolongation or prolongations of the roof support and/or the frame members.
11. A vehicle according to claims 9 and 10, wherein a lamp or lamps is mounted on the end of a frame members disposed in the longitudinal central vertical plane of the vehicle and projecting beyond the roof support.
12. A vehicle according to any one of claims 1 to 11, wherein the frame member or members and/or the roof support is or are mounted detachably on the vehicle wholly or in part.
13. A motor vehicle substantially as hereinbefore described with reference to the accompanying drawing.

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